

Date: February 10, 2014

To: Water Quality Goal Implementation Team

From: Norm Goulet, Chair
Urban Stormwater Workgroup
Tom Schueler, Stormwater Coordinator
Chesapeake Bay Program

Re: Revised Memo: Application of CBP-Approved Urban BMP Protocols to Credit Nutrient Reduction Associated with Installation of Homeowner BMPs

This memo outlines the recommended protocol to get nutrient reduction credit in the Chesapeake Bay Watershed Model for the installation of verifiable homeowner BMPs. The USWG has approved a memo outlining guidance on crediting of homeowner BMPs (USWG, 2013). This memo includes WTWG-approved guidance to simplify and streamline reporting of homeowner BMP data, as outlined in Section 2.

Section 1. Definition of Homeowner BMPs

Homeowner BMPs refers to the installation of one or more of the following practices on existing residential properties:

- Rain gardens
- Rainwater harvesting
- Downspout disconnections or dry wells
- Permeable hard-scapes (e.g., sidewalks/driveways)
- Urban nutrient management
- Tree planting
- Impervious cover removal

These practices may be installed by the homeowner or by a private contractor. Increasingly, Bay communities are providing technical assistance and financial incentives to homeowners to install these practices.

As of October 2013, more than 50 communities or watershed groups in the Bay watershed were offering assistance or incentives (see Appendix D in CSN, 2013). Financial incentives include discounts on stormwater utility fees and direct subsidies/rebates to the homeowners.

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The crediting system can only accept homeowner BMPs for which the CBP has currently approved protocols for defining and verifying removal rates. Three expert panel reports have been recently approved that provide this critical technical support:

- Stormwater Retrofits (Category: New On-site Retrofit)
- Urban Nutrient Management
- Urban Tree Planting

Table 1 describes which expert panel BMP reports are associated with each individual homeowner BMP and the technical data used to establish a nutrient credit. Other homeowner practices may be added in the future (e.g., conservation landscaping) if their performance is defined by a CBP-approved expert panel report.

Table 1 Link Between Expert Panel Reports and Homeowner BMPs Credits		
<i>Individual BMP</i>	<i>Status</i>	<i>Notes</i>
Rain Garden	Approved	Define drainage area (DA) and rainfall depth treated by each individual practice and then use the retrofit adjustor curves of expert panel for on-site retrofits
Rain Barrel	Approved	
Permeable Pavement	Approved	
Downspout Disconnection	Approved	
UNM Pledge ¹	Approved	Define turf area (TA) and associated removal rates based on risk factor for each individual urban nutrient management plan or pledge, as specified in expert panel report
UNM Plan, Hi Risk ²	Approved	
Tree Planting	Interim/ Pending	Interim rate exists for sf of tree canopy, but an expert panel is expected to modify rate in 2104
Impervious Cover Removal ³	N/A	Impervious cover converted to pervious cover
<i>Notes:</i>		
¹ May not be acceptable in some Bay states		
² Communities in MD may not be eligible for this credit		
³ Model as a land use change from impervious load to pervious load		

Section 2. Three Specific Reporting Issues for Homeowner BMP

The WTWG approved guidance for three specific modifications in BMP reporting to simplify the flow of homeowner BMP data.

1. **AGGREGATION:** Allow localities or designated third parties to aggregate individual homeowner BMP data into a single practice at the county level, which the local government would then report to the state without any specific geographic location data (apart from the river-basin segment or locality in which it occurred).
2. **ENTER HOMEOWNER BMP AS A UNIQUE CLASS OF RETROFIT IN SCENARIO BUILDER:** To prevent confusion and possible double-counting, aggregate homeowner BMP data will be entered as a unique practice in Scenario Builder, as either (a) the total acreage treated by on-site retrofits (HOME-BMP) or (b) total acreage treated by qualifying UNM practices (HOME-UNM), or (c) total square feet of tree planting (HOME-TP).

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3. **NEIEN FLEXIBILITY:** Homeowner practices are individually small but collectively so numerous that it is neither practical nor useful to give them a specific individual geographic address in NEIEN. To receive credit, a designated third party or local governments, should they choose to opt in to this program must maintain records for each individual homeowner BMP, including contact information and geographic information (lat/long or street address). Such entities need to retain specific data records on individual practices in order to track and verify them over time.

3. Verification Issues Associated with Homeowner BMPs

To promote greater engagement by land owners in Bay restoration, the USWG approved streamlined verification procedures for non-regulatory BMPs on January 21, 2014 (USWG, 2014) which is considered a minor source of state-wide urban sector nutrient reductions, as defined by the CBP-VRP (2013). The basic premise is to simplify the homeowner BMP reporting process while still retaining a high degree of verification rigor, using the following measures:

- The actual installation of each homeowner BMP must be verified by a designated third party or a local government, should it choose to opt in to this program, at the time construction is completed. Homeowner submitted BMP data will require validation, by spot checking it against typical default values for the practice.
- The credit duration for homeowner BMPs has been reduced to 5 years as compared to the 10 years afforded to larger retrofits (UREP, 2012). Credit duration for Urban Nutrient Management is 3 years (UNMP, 2013). The duration for urban tree planting or urban tree canopy will be based on the forthcoming Forestry Verification guidance and tree planting expert panel's recommendations. The credit can be renewed based on verification that the practice still exists and is working.
- A designated third party or local government may opt to use the sub-sampling approach as outlined in USWG (2014) for verification. Alternatively, they may request homeowners to submit digital photos to confirm their practices, with the final decision on BMP condition made by the locality or designated third party.

4. Local and State Participation in Homeowner BMP crediting.

- Local governments may elect to opt out of the homeowner BMP crediting program if they feel the nutrient reduction credits are not worth the increased staffing costs for reporting, tracking and verification.
- State governments retain approval authority over homeowner BMP reporting for pollutant reduction crediting. State governments may require that homeowner BMP reporting conform with state urban BMP reporting and tracking systems and verification requirements.

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References

Chesapeake Bay Partners Verification Review Panel (CBP-VRP). 2013. *Verification Guidance and Recommendations to Six Source Sector Workgroups, the BMP Verification Committee and the Seven Watershed Jurisdictions*. November 19, 2013.

Chesapeake Stormwater Network (CSN). 2013. *Homeowner Guide for a More Bay-Friendly Property*. Ellicott City, MD.
<http://chesapeakestormwater.net/2013/04/homeowner-bmp-guide/>

Urban Stormwater Workgroup (USWG). 2013. Background on the Crediting Protocols for Nutrient Reduction Associated with Installation of Homeowner BMPs. Chesapeake Bay Program. Approved November 21, 2013

Urban Stormwater Workgroup (USWG). 2014. Final Recommended Guidance for Verification of Urban Stormwater BMPs. Approved January 21, 2013.